Abstract

An interferometer uses birefringent elements for splitting and combining beams of orthogonal polarization, and for changing the relative phase between the orthogonally polarized beams. A polarization sensitive detector is used to detect a fringe pattern whose periodicity is dependent on the relative optical paths traversed by the orthogonally polarized beams. In an embodiment of the invention, a birefringent beam splitter has an input path and first and second output paths. A birefringent beam combiner has first and second input paths and an output path, the first and second input paths of the birefringent beam combiner aligned respectively with the first and second output paths of the birefringent beam splitter. A polarization sensitive detector is disposed on the output path of the birefringent beam combiner to detect the periodicity of the fringe pattern.